

WHAT IS CLAIMED IS:

1. Aluminium wrought alloy with an aluminium matrix, incorporating at least a soft phase and hard particles, in which the soft phase is at least one element from a first group of elements consisting of tin, antimony, indium and bismuth and the hard particles are scandium and/or zirconium, and at least one element from a second group of elements consisting of copper, manganese, cobalt, chromium, zinc, magnesium, silicon and iron, and inter-metallic phases of scandium, zirconium with aluminium or aluminium with the elements from the second group of elements, characterised in that the element (s) of the first group of elements is (are) present in a quantity of a total of 4.5 % by weight maximum, the element(s) of the second group of elements is (are) present in a quantity of a total of 8.5 % by weight maximum, preferably 3.5 % by weight, scandium and/or zirconium is (are) present in a quantity of a total of 0.8 % by weight maximum, and the rest is aluminium with the usual impurities contained in the melt.

2. Aluminium alloy as claimed in claim 1, characterised in that the proportion of the soft phase is at least 0.1 % by weight.

3. Aluminium alloy as claimed in claim 1, characterised in that the proportion of the element(s) of the second group of elements represent(s) at least a total of 0.1 % by weight.

4. Aluminium alloy as claimed in claim 1, characterised in that

the proportion of scandium and/or zirconium is at least a total of 0.05 % by weight, in particular 0.1 % by weight.

5. Aluminium alloy as claimed in claim 1, characterised in that the proportion of zirconium is in the range of between 0.01 % by weight and 0.5 % by weight, in particular in the range of between 0.05 % by weight and 0.23 % by weight.

6. Aluminium alloy as claimed in claim 1, characterised in that the proportion of scandium is between 0.05 % by weight and 0.5% by weight, in particular in the range of between 0.05 and 0.25 % by weight.

7. Base layer made from an aluminium alloy for a bearing element, which may be disposed between a protective shell and a running layer of the bearing element, characterised in that the aluminium alloy is as claimed in one of claims 1 to 6.

8. Bearing element, in particular a plain bearing or thrust ring, with a protective shell, a running layer and a base layer disposed in between, characterised in that the base layer is made from an aluminium alloy as claimed in one of claims 1 to 6.

9. Bearing element as claimed in claim 8, characterised in that the base layer is disposed directly on the protective shell.

10. Bearing element as claimed in claim 8, characterised in that the running layer is made from an alloy with a base of lead, tin, bismuth, indium or copper.

11. Bearing element as claimed in claim 8, characterised in that the running layer is a layer of plastic.

12. Bearing element as claimed in claim 11, characterised in that the plastic layer is selected from a group consisting of polyamide 6, polyamide 66, POM, silicones, PEK, PI, TPI, P SEK, PPS, PVDF, as well as mixtures thereof.

13. Bearing element as claimed in claim 11, characterised in that the plastic layer contains a solid lubricant, such as MoS₂, graphite, for example.

14. Bearing element as claimed in claim 8, characterised in that the running layer is a lubricating varnish.